



Market Situation for Hawaii-Farmed Ornamental Fish

The fascination with ornamental fish is worldwide and as old as civilization. Early Egyptians kept fish for pleasure, and the Sung dynasty Chinese raised goldfish and koi for their aesthetic value. Special fish are found in the legends and histories of many cultures. Today, keeping ornamental fish in aquariums is a popular hobby.

Ornamental fish for aquariums were originally collected from the wild. Holding areas evolved into production areas, and the aquaculture of ornamentals was born. Breeders have created and commercialized many varieties of fish that display dazzling color combinations and a vast array of fin conformations. Commercial production of fresh-water ornamental fish and plant varieties in ponds and tanks is a new industry in Hawaii, with growth potential. Fresh-water ornamental fish comprise 96 percent of the ornamental fish sold in the United States³.

The marketing data on ornamental fish is not complete. This report summarizes available data from various sources*, which might be of interest to people in the ornamental aquaculture industry.

Hawaii's ornamental fish situation

The farm-gate value of ornamental fish produced in Hawaii has been increasing in recent years. Estimates of this value are \$226,000 in 1994, \$271,700 in 1995, and \$445,800 in 1996⁹. Although the exact nature of their businesses was not reported, 41 firms are listed as ornamental fish wholesalers operating in Hawaii⁷. Experts indicate that the local market for ornamental fish is saturated, and further increases in the value of sales must come through exports⁸.

Commercial U.S. production

Florida is the leader in commercial ornamental fish production in the United States. About 200 full-time and 100 part-time growers operated about 20,000 ornamental fishponds on 6000–8000 acres, which generated farm-

gate sales of \$52.2 million in 1992^{4,6}. The value of farm-gate sales increased to \$57.2 million in 1997⁵. However, Florida producers rarely ship west of the Rocky Mountains because of poor transportation links⁸.

U.S. market potential

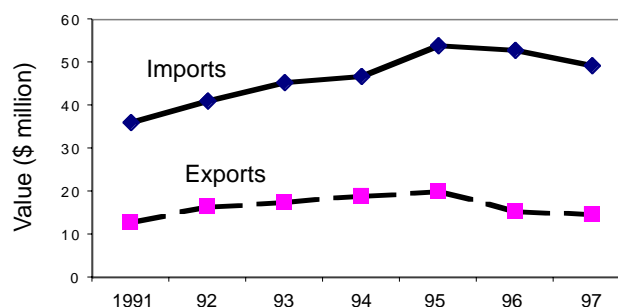
The United States is considered the largest market for ornamental fish in the world. About 10 million U.S. households had aquariums in 1994. In addition, many stores, restaurants, and offices have aquariums. Sales related to ornamental fish, including fish stock, equipment, supplies, and accessories, were made by 9000–12,000 retail businesses and were estimated to be \$910 million in 1993. About 38.5 percent of these sales, or over \$350 million, was the purchase of ornamental fish stock⁶.

U.S. imports and exports

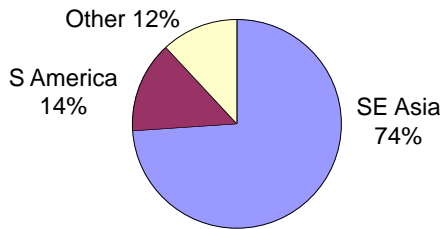
The value of U.S. ornamental fish imports and exports increased steadily from 1991 to 1995 but decreased in both 1996 and 1997¹ (Fig. 1). The value of imports, \$49.3 million, was about three times the value of exports, \$14.6 million, in 1997. About three-fourths of the U.S. imports came from Southeast Asia² (Fig. 2), and over half of the imports entered through western U.S. ports² (Fig. 3).

Over 1500 different ornamental fish species were imported in 1992³. However, three species accounted for over 40 percent of the number of fish imported: gup-

Figure 1. Ornamental fish import and export trends.



*References, indicated with superscript numbers, are given on p. 2.

Figure 2. Sources of ornamental fish imports.

pies (*Poecilia reticulata*) at 28.8%, neon tetras (*Paracheirodon innesi*) at 11.3%, and platies (*Xiphophorus maculatus*) at 5.4%. These commonly imported species come primarily from Southeast Asia. Hong Kong is the largest (86%) supplier of neon tetras, while most of the guppies come from Singapore (54%) and Trinidad and Tobago (38%). Singapore is the largest supplier of platies (75%).

Shipments to Canada and Japan account for about 46 percent of the total U.S. export value (Figure 4). Hawaii may have a comparative advantage in these markets because of the good transportation links to them.

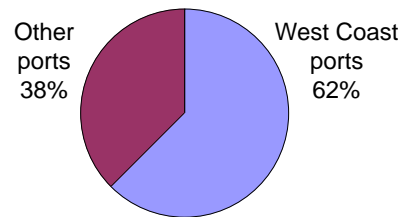
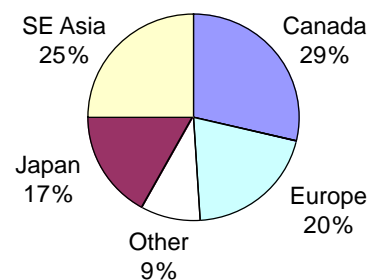
Summary

The local Hawaii market for ornamental fish is saturated. If Hawaii producers want to expand the ornamental fish farming industry, they must compete with U.S. mainland and foreign suppliers for the western U.S. mainland market or overseas markets. The primary competitor in these markets is the Southeast Asia producer. The primary foreign markets for U.S. exports of ornamental fish are Canada and Japan. Hawaii ornamental fish producers may be able to compete in these and the U.S. West Coast and Asian markets because of Hawaii's location and a reputation for high-quality, exotic products. However, Hawaii producers must be competitive with other suppliers in terms of the ultimate cost of getting their product to these markets.

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Figure 3. U.S. import entry points for ornamental fish.**Figure 4. Destinations of U.S. ornamental fish exports.**

Sources of information

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